

REMARKS

Claims 1, 2, and 4-24 are presented for further examination. Claims 1, 2, 4, 5, 13, and 21-24 have been amended. Claim 3 has been canceled.

In the Office Action mailed January 19, 2006, the Examiner rejected claims 1-19 and 21-24 under 35 U.S.C. § 103(a) as obvious over Dachzelt et al. (of record) in view of Bianco (of record). Claim 20 was rejected as obvious over Dachzelt in view of Bianco and further in view of Answers (of record).

Applicants respectfully disagree with the bases for the rejections and request reconsideration and further examination of the claims.

Claim 1 is directed to a method for protecting the contents of an electronic document having a plurality of strings of characters to be encrypted. The method includes confusing characters belonging to an electronic input document through an invertible scrambler to obtain a confused document having a plurality of confused characters in which each string of characters to be encrypted is added to strings of confused characters obtained by multiplying strings of previously confused characters by respective multiplication constants. Claim 1 further recites diffusing the confused document by performing an EXOR operation on it in combination with chaotic characters to obtain an encrypted document.

Nowhere do Dachzelt et al. or Bianco, taken alone or in any combination thereof, teach the combination recited in claim 1 for protecting the contents of an electronic document that has a plurality of strings of characters to be encrypted. More particularly, neither of these references teach or suggest confusing the characters by adding a string of the characters to strings of confusing characters obtained by multiplying strings of previously confused characters by respective multiplication constants. Nowhere do Dachzelt et al. or Bianco, taken alone or in any combination thereof, teach or suggest diffusing the resulting confused document by performing an EXOR operation on it in combination with chaotic characters to obtain an encrypted document. In view of the foregoing, applicants respectfully submit that claim 1 and all claims depending therefrom, *i.e.*, claims 2, and 4-12, are allowable.

Independent claim 13 is directed to a device for protecting the contents of an electronic document that includes strings of characters to be encrypted. The device includes a

confusion block for confusing an electronic input document, the confusion block comprising an invertible scrambler that supplies a confused document using a previously-confused document. Claim 13 further recites a diffusion block that is cascade-connected to the confusion block, the diffusion block comprising EXOR mixing means for mixing the confused document with chaotic characters to supply an encrypted document. Applicants respectfully submit that claim 13 is allowable because the combination of Dachzelt et al. and Bianco do not teach or suggest the foregoing features. Dependent claims 14-20 are allowable for the features recited therein as well as for the reasons why claim 13 is allowable.

Independent claim 21 is directed to a method to protect the contents of an electronic document that comprises acquiring encryption keys and an initial chaotic value; acquiring input character strings; generating confused character strings by calculation using the input character strings, the encryption keys, and previous confused character strings to obtain a confused word. Claim 21 further recites calculating a current chaotic value from the initial chaotic value and calculating an encrypted word by performing an EXOR operation on the confused word and the current chaotic value to obtain an encrypted word. Dependent claim 22 further recites decrypting the encrypted word by adding the encrypted word to a chaotic value identical to the chaotic value and subtracted from a previously decrypted word using an unscrambler element having a structure similar to that of a scrambler that generated the confused word, and further using identical encryption keys. Applicants respectfully submit that claims 21 and 22 are allowable over the combination of Dachzelt et al. and Bianco because they fail to teach or suggest the combination of claim 21.

Claims 23 and 24 are directed to a method for protecting the contents of an electronic document in which an EXOR operation is performed. Applicants respectfully submit that claims 23 and 24 are allowable because nowhere do Dachzelt et al. and Bianco, taken alone or in any combination thereof, teach or suggest performing an EXOR operation on a subsequent chaotic value and a plurality of confused character strings to obtain an encrypted word in combination with the other steps of claim 23.

In view of the foregoing, Applicants respectfully submit that all of the claims are now clearly in condition for allowance. In the event the Examiner finds minor informalities that

can be resolved by telephone conference, the Examiner is urged to contact Applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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